

NOTES ON SNAKES COLLECTED IN FYZABAD.

BY

MAJOR F. WALL, I.M.S., C.M.Z.S.

Climate.—Fyzabad enjoys a first-rate cold season which may be said to extend proximately between the 1st November and the 28th February. Even at the coldest period, however, the sun shines hotly for many hours in the day, and one would expect sufficiently to entice snakes abroad to bask, and revel in its genial rays. The figures in my table of seasonal abundance show that but few are abroad at all during the cold months, and though when out duck-shooting I occasionally saw a snake, and usually a *Tropidonotus piscator* in the jheels, the majority that came in to me during that time had been disturbed during some earth work.

The hot season, which is one of average drought, ended in the year 1905 on the 1st of July when heavy rains began. In the year 1906 the rains broke on the 18th of June.

My residence in Fyzabad covered a somewhat broken period of 23 months, but 4 months' absence on leave makes the actual time spent in making my collection 19 months, and of these fully 8 were embraced in two cold seasons.

My sum total of specimens amounted to 704, but this large total only included 18 different species, one of which proved to be new to science (*Bungarus walli*).

With very few exceptions (say a dozen) everyone of these specimens were captured in cantonments or close at hand. Perhaps a diameter of 3 miles would cover the area productive of this total.

Only 3 species were poisonous, the aggregate amounting to 107. About 2 specimens in 13 therefore were poisonous.

1 specimen in every 11 was a common krait (*Bungarus candidus*), 1 in every 88 a Wall's krait (*Bungarus walli*), and 1 in every 18 a cobra (*Naia tripudians*).

Snakebite.—The only cases of snakebite that came to my knowledge were five. In these cases I traced the offender, and it proved to be *Tropidonotus piscator* on three occasions, and *Lycodon aulicus* on two occasions, both harmless species.

I saw another case reputed to be one of snakebite in the Cantonment Hospital. The offender had not been captured, and I expressed the

opinion that the bite, if inflicted by a snake at all, was caused by a harmless kind. The man showed no symptoms of inoculation by snake venom, and speedily recovered when reassured as to the nature of the wounds. One case only that I heard of was probably one of snake-poisoning. I was absent from the station at the time, but the medical officer who attended, and was called in only when the man was in the act of expiring, related the conditions which made a diagnosis of snake-poisoning extremely probable. The Cantonment Magistrate very kindly furnished me with the reputed fatalities from snakebite in the Cantonment for a period of ten years, and though they appear astonishingly few when one considers the large population of poisonous snakes and the numbers of barefooted people in Cantonments, it is a fact that the figures returned for this station represent a mortality more than twice the average for the whole of India. Recently a question was put in the House of Commons asking the snakebite mortality for India, which elicited the following figures from Mr. Morley for thirty years up to 1905. The average in the first decade was 95·5 per annum per million, for the second 100·9, and for the third 98·1, *i.e.*, 98 per million for 30 years. It will be seen that in ten years in Fyzabad Cantonments 11 deaths were returned as due to snakebite.

Deaths from Snakebite in Fyzabad.

Year.		1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	Total.
Male	... ..	1	...	...	1	3	...	...	1	...	1	7
Female	... ..	1	...	...	1	...	...	1	...	...	1	4
Total	... ..	2	...	...	2	3	...	1	1	...	2	11

According to the Census of 1891 the Cantonment population was 5,346. This for five years amounts to 26,730. The population in 1901 was 6,096, so that for five years the figures are 30,480.

The aggregate population for this decade may be taken, therefore, as 57,210.

11 deaths in a population of 57,210 works out to about 198 per million.

Tabular List of 704 Snakes collected in Fyzabad.

NAME OF SNAKE.	1904.			1905.												1906.				Total Exampls.	Total Exampls. on 6th August 1906.							
	November.	December.	January.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.			May.	June.	July.	August.			
1 Typhlops braminus	1																					8			12			
2 Python molurus																										1		
3 Xen. cerasogaster																								91		91		
4 Trop. piscator																								27	82	131	26	
5 Trop. stotatus		4	5			2	3	4	10	26		5	3										6	42	45	156	7	
6 Hel. schistosus																										8	3	
7 Lycodon striatus																										13	1	
8 Lycodon auleus												1	2	1	2											35		
9 Zamenis mucosus												3		2												80	1	
10 Zam. fasciolatus																										1		
11 Simotes arvensis																										16		
12 Hyps. sieboldii																										12	2	
13 Dips. trigonatus																										15		
14 Psam. leithii																										1		
15 Psam. condanarus																										23	3	
16 Bungarus walli																										8	3	
17 Buug. candidus																										62	2	
18 Nata tripudians																										89		
																											704	103

GRAND TOTAL ..

TYPHLOPIDÆ.

Typhlops braminus.

I obtained many specimens but failed to register many of them, so the total shown in my list is considerably below the mark.

The 8 specimens obtained in July 1906 were all recovered from the stomachs of young Kraits (*B. candidus*), which seem to subsist in the main on these defenceless little creatures.

BOIDÆ.

Python molurus.

A single young specimen was captured by fishermen in September 1905 either in or about the river Gogra, and was kept for some time as a pet by a lady, but refusing dainty offers of food died after a few weeks. Here I may mention that Mr. Prince, of the 85th Regiment, when out shooting in the United Provinces in an adjoining district, encountered and killed a gravid female on March 9th, 1906. It measured 18 feet 3 inches, and contained from 50 to 100 eggs the size of goose eggs.

COLUBRIDÆ.

Xenochrophis cerasogaster.

Of this extremely handsome species, for which I think the name "Painted Keelback" would be most appropriate, I obtained 91 specimens, and it is very remarkable that though it is evidently so common in this locality I was resident in Fyzabad for 22 months before I obtained my first example. I must, however, remark that August 1906 provided me with all my specimens, and that in August 1905 I was in the Hills. Of this large total 35 were brought me on the 6th August, the cause of this large and sudden influx being attributable to extensive floods which inundated many miles of country in the immediate vicinity, so that every knoll that remained above the surface of the water was abundantly tenanted with every sort of refugee, from animals the size of nilghai, cattle, pigs, etc., to those as diminutive as ants. Snakes literally swarmed in every direction, and many hundreds must have met an untimely death besides those that were brought in to me.

All the specimens at first came from the banks immediately bordering the water, but a few days later some specimens were sent to me which had been encountered in and about Cantonments and even in habitations a little distance removed from the water.

Of the 91 specimens only 11 exceeded 2 feet in length. Seven of these were females, 3 males, and 1 was not sexed. The largest male was 2 feet $1\frac{3}{4}$ inches, and the largest female 2 feet $6\frac{1}{2}$ inches. 36 were not sexed, being either liberated, mutilated, or decomposed. Of those sexed 20 were males and 35 females.

No female was eggbound; the breeding season was evidently past.

The secretion of the anal glands in both sexes is pale yellow in colour. The male clasper is thickly set from base to extremity with small recurved claw-like processes.

The young of this year measured in August from $8\frac{7}{8}$ to $11\frac{1}{2}$ inches.

The navel involved 2 or 3 ventrals in 3 females, 12 ventrals intervening between it and the anal shield in 2, and 13 in 1 specimen.

The young of last year varied from 1 foot $3\frac{3}{4}$ inches to about 1 foot $6\frac{3}{4}$ inches, so that they grew about 7 inches in their first year.

Food.—I found many with a material *in gastro* too digested to recognise, until I found one with a freshly ingested shrimp, when I realised from the colour, texture, and fishy odour the true nature of the contents of other stomachs.

Habits.—From what has already been said of the circumstances attending the capture of my specimens, it is very evident that the species is aquatic or subaquatic in habit, a fact endorsed by the nature of its food.

Many of these specimens were brought alive, and undamaged, and I found them very quiet inoffensive little creatures, both young and old alike. They tried hard to escape, but when molested repeatedly betrayed alarm by erecting the body, and nervously protruding the tongue in the manner so typical of snakes. This organ is red at the base, and has black tips.

During erection the head and forebody are carried in a manner reminding one of a camel, and sustained in this attitude whilst the creature rhythmically inflates itself in usual anguine fashion, but it does so only to a moderate degree. During this effort the relatively constricted neck and forebody become more apparent and the body is seen to be fusiform in figure. I rarely succeeded in provoking one to bite, though they evinced much objection to being grasped.

Colour.—It is one of the most strikingly beautiful snakes I know. A moss-green hue often very bright in quality adorns the crown, and merges laterally into chocolate or cardinal. This chocolate or cardinal forms a postocular streak abruptly limiting the bright canary or white of the

upper lip, and passes down the body along the flanks. In all the young the upper lip is glossy white, but this invariably changes so as to become a canary yellow in the adult. The lower lip is glossy white, more or less finely mottled with cardinal or chocolate, especially about the sutures.

A crimson eye emulates the ruby in the brilliancy and softness of its colour and the charm of its setting. The body dorsally is uniform, or nearly uniform olive-green of various shades, in which some darker spots are sometimes obscurely visible. Sometimes a more or less distinct lighter olive-green streak runs along the confines of the 5th and 6th rows above the ventrals. A well-defined flank line bright yellow in adults, white in young, runs along the edges of the ventrals and is continued almost to the tail tip. This is bordered below with a red or cardinal line, beginning in the neck, and ceasing at or before the vent. The contrast and definition of this dual band reminds one of a gay hat ribbon.

The belly is uniformly black posteriorly in the young, especially beneath the tail, but becomes more and more abundantly mottled with white anteriorly. In the adult the black is less protracted anteriorly, frequently merges to a crimson brown, or bright mahogany, and the white dappling is more extensive and pronounced. In specimens about to slough the red hues appear lilac.

The pointed snout and pronounced *canthus rostralis* deserve special mention, also the very unusual distensibility of the integument beneath the chin. Here the intervals are broader than the shields, and scales themselves, a feature which seems to me should argue a gastronomic taste for relatively large creatures, whereas this is not supported by fact.

Among the head shields the temporals are remarkable, perhaps unique among Indian snakes. They are elongate, and disposed in two oblique series of 3 each, the anterior being the larger.

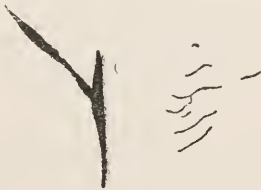
The penultimate supralabial is also remarkable in touching but one temporal.

In a few specimens a few of the subcaudals were entire, the 3rd and 4th in one, 3rd, 4th and 5th in one, 4th and 5th, 8th and 9th in one, and 28th and 29th in another. The supralabials were abnormal in one or two. They were 9 with the 4th and 5th touching the eye in one, and 10 with the 5th only touching the eye in another. Both these aberrant features were present on one side only.

The scales two heads lengths after the head are 19, at midbody 19, and two heads lengths before the vent 17. The absorption from 19 to 17 rows is brought about by a disappearance of the 4th row above the ventrals, which becomes fused with the 3rd usually, sometimes the 5th.

Tropidonotus piscator.

Of this I obtained 131 specimens. As noted by me in other stations it is very little in evidence during the hot season, but emerges from retirement as soon as ever the rains break, and is then as abundant here as in other parts of India. I obtained two in May and one in June, 1905, and none at all during the hot season of 1906. All the other specimens were brought in after the rains were established. This species was responsible for three bites inflicted by snakes that I was able to trace to their origin, and in this connection it may be of interest to remark here how impossible it is to judge from the



impressions of the teeth whether a bite has been inflicted by a poisonous or non-poisonous species. To hazard a guess under the circumstances is quite unjustifiable. I give the patterns of the wounds inflicted in two cases, drawn by me with extreme care.

A specimen I found one day whilst duck shooting had insinuated itself between some boards facing the supports of a bridge, and died a miserable death. The fact that it had struggled to drag its body through a fissure too narrow for it, instead of retracting it when conscious of undue compression, argues a very feeble intelligence.

Sexes.—Of 44 individuals sexed, 25 proved to be females and 19 males.

Breeding.—Only one gravid female was captured. This contained 47 eggs, $\frac{9}{10}$ of an inch long, on the 22nd February.

Hatching.—Though I got no hatchlings in either year before July, the size of some of the specimens I obtained in that month compared with the measurements of the young when hatching, and the rate of growth, both of which I am fully acquainted with, leave no doubt that they must have emerged in June or earlier. In July 1905 I obtained six, varying from $8\frac{3}{4}$ to $10\frac{5}{8}$ inches, and in July 1906, seventeen specimens ranging from 8 to $12\frac{1}{4}$ inches in length.

Some of the very young were extremely active, struck out, and bit fiercely, and actually jumped off the ground in their endeavours to elude capture.

Food.—7 examples had fed recently. A single frog had formed the meal in three cases, two frogs in one case, one frog and three toads in another, and one toad in another. A hatchling $10\frac{1}{4}$ inches long was distended with tadpoles, of which I counted 8 or 9.

Colour.—All the specimens were with black or blackish spots. In some these spots were very large, in others about the size of the intervals, whilst in others they were much smaller. Every variation between these three types was met with. In some the spots were very black, giving off a bluish sheen on reflected light, in others they were sombre black, and in others again very obscure. The intensity of the black appears to be chiefly, if not entirely, dependent on the interval which has elapsed since the last desquamation. In no instance was there a suspicion of red adornment.

Tropidonotus stolatus.

156 specimens came into my hands. I sexed 118, and found 57 males and 61 females. They were most abundant in the rains, but during the hot season of 1905 I got 2 in March, 3 in April, 4 in May, and 10 in June.

Breeding.—I obtained in all 18 gravid females—14 in the month of July and 4 in August. 11 was the maximum number of eggs, 3 the minimum. One of these specimens brought alive I kept, and she deposited a single egg on the 7th, and 10 more on the 13th of July. In all the other cases the mothers were dead, and the eggs found *in abdomina*.

On the 30th of July 1906 some sepoy in my regiment brought me two specimens which they told me they had found fighting. They proved to be a male and a female, the latter heavily gravid with 10 eggs in an advanced degree of maturity. Whether this young gentleman was pushing his attentions too far, and really provoking the expectant dame to a righteous indignation and exhibition of temper, must remain a matter of conjecture, but it seems to me the probable explanation of the incident. They were described as confronting one another, and rearing up their bodies, and this behaviour had been witnessed some minutes before they were rushed upon and captured.

Food.—Several specimens had freshly fed. One contained a small toad (*Bufo andersonii*), and all the rest frogs. One I found had swallowed 3 small *Microhyla ornata*, and another a single frog of the same species. Another had dined off *Rana tigrina*, and another was discuss-

ing a *Rana breviceps*. In the last instance the frog disadvantageously seized was still alive, but a large rent in his side through which much lung substance was protruding, told its own story.

In one case the meal was too far digested to recognise except that it was batrachian in character. I am surprised to see on consulting Mr. Boulenger's Catalogue (Vol. 1, 1893, p. 253) that he remarks on the labials of this species: "Eight upper labials normally, third, fourth, and fifth entering the eye."

This I found true with many exceptions however (10 out of 50) of my Cannanore specimens, the exceptions in almost every case having seven labials with the 3rd and 4th only touching the eye. It is rather curious that in Fyzabad the rule and the exceptions characteristic of Cannanore specimens, are reversed. Thus in Fyzabad examples, where I have recorded the labials, 66 are peculiar in having seven labials with the 3rd and 4th touching the eye, and but 21 have eight labials with the 5th also touching the eye. In 2 examples the labials were eight, with the 4th and 5th only touching the eye.

Colour.—Every one of the Fyzabad specimens were what I stigmatise the blue variety. In these the overlapped edges of the scales are blue. I never saw any red adornment either beneath the scales, on the neck, or on the belly, with the exception of the slight and obscure roseate streak that so often passes along the flanks where the ventrals meet the last row of costals.

Helicops sehistosus.

I obtained all my 8 specimens in the month of August. 5 of these were females, 3 males.

It is to be noted that the ventrals in these specimens ranged between 145 and 157, whereas in 13 specimens I obtained in Bangalore they vary from 139 to 149. There is therefore a decided tendency for these shields to exceed those of southern examples. Added to this one very noticeable feature in my Fyzabad specimens was the complete absence of the red line which in southern specimens runs along the confines of the 5th and 6th rows above the ventrals where the scales number 19; the 4th and 5th where the scales are 17. All these Fyzabad specimens had bright yellow underparts. I think these specimens may be taken to constitute a local variety.

All the specimens came from the neighbourhood of the river, 3 of them during flood on the 6th of August. The two smallest examples

are evidently young of the year. I have arranged these specimens in tabular form as follows :—

Sex.	Length.	Tail.	Ventrals.	Subcaudals.	REMARKS.
♀	2' 10 $\frac{1}{4}$ "	7"	157	63	3 prefrontals, one median.
♀	11 $\frac{3}{4}$ "	2 $\frac{5}{8}$ "	154	69	Last ventral divided. 13 ventrals between navel and anal.
♂	1' 10"	6 $\frac{1}{2}$ "	147	81	The 35th, 36th, and 37th ventrals divided.
♂	1' 9 $\frac{7}{8}$ "	6 $\frac{3}{4}$ "	148	80	3 prefrontals, one median.
♀	2' 1 $\frac{5}{8}$ "	5 $\frac{3}{8}$ "	156	58	Tail slightly docked.
♀	2' 5"	6 $\frac{3}{8}$ "	151	66	
♂	9 $\frac{1}{2}$ "	2 $\frac{1}{2}$ "	145	80	7 supralabials on the right side, the 3rd and 4th touching the eye. 13 ventrals between the navel and the anal.
♀	2' 0 $\frac{1}{4}$ "	5 $\frac{3}{8}$ "	149	67	

Lycodon striatus.

I obtained 13 specimens. 7 of these were males, 4 females, and in 2 instances the sex was not noted. Two or three of these specimens were brought in alive and unhurt. They proved to be very timid, never attempting to bite when handled. They betrayed alarm by flattening their bodies on to the ground, and when molested buried their heads beneath coils. If after this exhibition of fear, one eye could still be discerned beneath the coil and an object was advanced towards it, by a brisk contortion the snake whisked its body round to shut out the danger from view. It was noticed, too, that frequently when handled the creature convoluted itself, and held itself rigidly so that it could be tossed into the air like a piece of knotted cane without disengaging its coils or relaxing its rigidity.

Breeding.—Two very interesting matrimonial incidents came to notice. On the evening of the 3rd of August 1906 a female was dislodged from a small heap of kunkur while the Club road was being remetalled. She proved to be gravid, and contained two eggs considerably advanced towards maturity. Early the next morning a male

was dislodged from the same heap, and it would appear that these two were cohabiting.

More interesting still on the 14th August a boy brought me 3 eggs and a snake, and told me he had dug up the eggs, and that there were two snakes with them. One snake, the same as the one produced which was a male *striatus*, he said had escaped. Originally there were 4 eggs, one of which got broken. I inspected the spot, and found that this happy family party had been disturbed beneath the roots of an ixora bush some twelve inches or so beneath the soil. The story was corroborated by other coolies working at the same spot, and there is little doubt that these two were mates who had not dissolved partnership, though the fruits of their union had matured into eggs which had been discharged. This is quite in consonance with other records contained in my note books.

The eggs struck me as being very remarkably large. A length of one inch for an egg in a mother, herself less than 13 inches in length, which is what I measured the eggs *in abdomina* in the specimen of the 3rd August, is remarkable. The measurements of one of the 3 eggs laid, which were brought me on the 14th August, were $1\frac{6}{20} \times \frac{7}{20}$ ".—They were all equally large.

Food.—It will be observed the food as in other *Lycodons* is mainly lacertine.

I have arranged the notes on these specimens in tabular form as follows:—

Date.	Sex.	Length.	Tail.	Ventrals.	Subcaudals	Remarks.
1904.						
2nd December ...	♂	1' 0 $\frac{1}{2}$ "	2 $\frac{3}{8}$ "	168	50	Found in brickwork of well.
1905.						
21st April ...	♂	9 $\frac{1}{4}$ "	1 $\frac{1}{2}$ "	163	47	Unearthed while digging. Seven upper labials, the 3rd and 4th only touching the eye. The tail of a skink, probably <i>Mabuia dissimilis</i> , in the stomach.
10th May ...	?	Much mutilated. Contained a skink (<i>Mabuia dissimilis</i>) in the stomach.

Date.	Sex.	Length.	Tail	Ventrals.	Subcaudals.	Remarks.
1905.						
20th July	♀	1' 3½"	2¼"	179	45	Killed in the 85th K. S. L. I. Mess in the evening.
1906.						
23rd March	♂	1' 0 ⁵ / ₈ "	2¼"	162	49	Labials seven, with the 3rd and 4th touching the eye.
8th July	♀	1' 0½"	2"	172	45	Killed in Cantonment Hospital Ward.
3rd August	♀	1' 1"	...	172	47	Contained a skink (<i>Mabuia Sp.</i>).
3rd August	♀	1' 0 ⁷ / ₈ "	...	174	47	Dislodged from heap of kunkur. 7 upper labials on the right side; the 3rd, 4th and 5th touching the eye. Gravid. 2 eggs one inch long.
6th August	?	Escaped from captivity.
14th August	♂	1' 1"	2 ³ / ₈ "	162	53	Unearthed with eggs while digging.
28th August	♂	Dislodged whilst digging.
29th August	♂	

Lycodon aulicus.

I obtained 35 specimens. Of the 32 sexed, 16 were males and 16 females. They were as numerous during the hot months as in the rains, and though scarcer they were not quite absent in the cold weather.

A large number were as usual caught in habitations.

Two cases of snakebite were traceable to this plucky and vivacious little snake.

It is worthy of remark that all but two of these specimens were adults, and in this respect it differed from most of the other species, and especially *Tropidonotus piscator*. (In the latter case large adults were in a very small minority.) Of 8 specimens that exceeded two feet in length only one was a male.

Food.—A mouse was taken on two occasions, and geckoes of the genus *Hemidactylus* furnished the meal in four other instances. The

tail only of a skink (spec. *Mabuia* ?) had been swallowed by two examples.

Breeding.—A male and a female were caught together (not united) on the 9th of January in the bottle godown of the club. I found eggs *in abdomina* once in March, once in April, once in June, and three times in July, and obtained a hatchling $7\frac{3}{8}$ " long in June. The number of eggs varied from 3 to 9.

Scale characters.—In no single instance was the anal entire. The contact of the præocular with the frontal though usual failed in several specimens. The upper labials (prone to more or less inconstancy in all species) were aberrant in some instances. They were 8 with the 3rd and 4th only touching the eye on the left side in one specimen, and 9 with the 4th and 5th only touching the eye on the left side in one specimen, and 9 with the 3rd, 4th, 5th and 6th, touching the eye on both sides in one specimen. The ventrals show a decided tendency to exceed those in southern examples. My records of these shields, however, are very imperfect.

♂ Ventrals 193 to 207. Subcaudals 62 to 71.
 ♀ „ 201 to 208 „ 62 to 69.

In Cannanore they were as follows :—

♂ Ventrals 177 to 186. Subcaudals 63 to 73.
 ♀ „ 192 to 203 „ 55 to 70.

Colour.—All the specimens were of one variety, which if one excludes the spotted or unspotted condition of the upper labials I would refer to Mr. Boulenger's variety D (Catalogue, Vol. I, 1893, p. 353). I do not think any attention should be paid to the labial spots. I find specimens otherwise identical in colour, and marks show the upper labials unspotted, and between this and the condition of large central brown spots there are individuals showing every gradation from a fine and sparse to a copious mottling of brown. Every specimen was barred with yellow, usually a pronounced canary yellow, but sometimes with a faint yellowish tinge, but never pure white.

Zamenis mucosus.

Of this common species I had 80 brought in to me. Of the 76 that were sexed, 43 were males and 33 females. They were most in evidence during the months of June, July and August, and in fact were scarce during the whole of the rest of the year.

Of specimens exceeding 6 feet 6 inches in length 22 were males

and but one a female, which was 6 feet $7\frac{1}{4}$ inches long. 5 exceeded 7 feet, the largest tapping 7 feet 5 inches.

It is curious that so many adults should have come in and so few young. Only 9 specimens were less than 4 feet long, and of these but 4 were less than 3 and none less than 2 feet.

A large specimen $6\text{ l. } 5\frac{3}{4}\text{ l.}$ long was seen in broad daylight in conflict with a mongoose, near the Cantonment Magistrate's Court. Attention was drawn to the spot by the disturbance in the grass, and the combatants were pursued, the mongoose disappearing, but the snake passed from the frying pan into the fire.

Food.—Many specimens had recently fed, and their choice in diet was very varied. A single toad had been taken on four occasions, once the victim was *Cacopus systoma*, and thrice *Bufo andersonii*. A single frog furnished the meal twice, on both occasions *Rana tigrina*. Remains of frogs were found in another. One had swallowed 3 large chicks, two of which were in the stomach and one in the gullet, and the fledglings egrets judging from ingested shell. One contained a gecko *in gastro*, and had just seized and killed a fledgling in a bush. Another contained a frog and two toads (*Bufo andersonii*), and another glutton had dined on a young tortoise, a lizard of the genus *Calotes*, and a toad (*Bufo andersonii*).

Breeding.—In Vol. XVII of this Journal (pp. 267 and 273), I mentioned two incidents which occurred at Fyzabad which showed that pairs were cohabiting, and enjoying one another's companionship, though the female contained eggs in an advanced stage of development. I obtained 12 gravid females which contained eggs in various stages of maturity. One was captured on the 20th of June, ten in July, and one in August. The maximum number of eggs in a clutch was 16, and the minimum 8. A clutch of eggs obtained on the 8th of August, found with a parent snake, hatched on the 11th September. The details of this very interesting event formed the subject of a separate note in this Journal (Vol. XVII, p. 1033).

Scale characters.—It is interesting to note the variation in the range of the ventrals, and subcaudals, which occurs locally in the same species. I have already alluded to this in dealing with other species in this paper.

In this species there is a very noticeable tendency for the subcaudals in Fyzabad specimens to fall short of the number in Cannanore

examples. My records, I regret to say, are rather meagre, but this tendency is marked, as will be seen from the following :—

Fyzabad.

8 ♂	Ventrals	...	192 to 207.	Subcaudals	100 to 126
8 ♀	,,	...	191 to 206	,,	108 to 115

Cannanore.

4 ♂	Ventrals	..	197 to 202.	Subcaudals	127 to 137
3 ♀	,,	..	192 to 196	,,	128 to 132

In Burma the subcaudals of 10 specimens in which the sexes are not recorded, were 102 to 119. A single specimen in Kashmir had 104, one in the Swat Valley 117. All these specimens (the only records available) conform to the Fyzabad range.

A specimen from Hakgalla in Ceylon had 134, and one in Trichinopoly 127; and these agree with the range given by the Cannanore examples.

Zamenis fasciolatus.

I obtained but a single small specimen of this uncommon snake in the month of July. It was alive, and probably a hatchling. It measured $11\frac{1}{4}$ inches, of which the tail accounted for $2\frac{1}{4}$ inches.

It was a very beautiful little creature showing much spirit and pluck. On irritation it erected itself and flattened the body after the manner of *Tropidonotus piscator*, and *stolatus*, which I thought peculiar in a species of this genus. The ventrals and subcaudals were 199+82 (the 2nd subcaudal entire). 20 ventrals were placed between the navel and the anal shield. The scales two heads lengths behind the head were 21, at mid body 23, and two heads lengths before the vent 17.

Simotes arnensis.

I obtained 16 examples. Of those sexed 8 were males, 7 females. One brought alive struck out at me repeatedly with open jaws, but in a very half-hearted way, for it never inflicted a bite. It flattened itself to the ground, and in this effort the quadrate bone must have been brought strongly into action; for the neck, which at other times is not apparent, became prominently so by the broadening of the hind part of the head.

Another live one I played with, and tried to get to strike, but it objected to facing my hand, or my handkerchief, and refused to menace. When I drummed my fingers on the floor in front, it turned and endeavoured to escape. It inflated its body in a peculiar

manner. It did so to a very marked extent, preserving the contour of its body in the effort. One could feel the resiliency offered by the column of air within, and this was abruptly defined at the 13th cross bar. Subsequently on dissecting the snake the lung was found to extend to the 11th cross bar only, so that the inflating effort may be judged from this to be considerable. Whilst trying to catch it by the neck it very cleverly evaded my dashes at it, but without attempting to bite me, but when I had got hold of its neck it somehow made a vigorous twist and buried its teeth into the soft of my thumb, producing two lacerations, the pattern of which I reproduce here. These bled freely.

Scale characters.—One specimen had the anal shield entire. Two others had fragments detached from the parietals, which some might call temporals. This last abnormality I am familiar with in other species of this genus. In one example the loreal was absent. All the specimens had the under parts unspotted, and thus conformed to Mr. Boulenger's variety A (Catalogue, Vol. I, 1894, p. 230).

The cross bars were picked out with white or buff, and in one instance at least were indented in the median line in front, and behind so as to be nearly bisected.

The trisagittate marks on the head were not connected by a median shaft as so commonly occurs in other species of the genus.

Food.—None had recently fed.

Breeding.—On the 22nd August two specimens were brought in, reported to have been climbing the same wall at the same time, and about two yards apart. They proved to be male and female. In the latter's abdomen I found four imperfectly developed eggs, two in each ovary. Two of these measured $\frac{9}{20}$ of an inch, and the others $\frac{12}{20}$ of an inch. One small and one large one in each ovary. The disparity in size suggested the possibility of superfœtation.

Another captured on the 18th August contained 5 eggs *in abdomina*, $1\frac{8}{20}$ inches long by $\frac{7}{20}$ of an inch broad.

Two specimens, which appeared to be hatchlings, were obtained in April, but I have little hesitation in supposing these to be last year's progeny after hibernation. In temperate climates I have on other occasions in the early spring found snakes little, if at all, larger than at the time of their production late in the autumn months. Fyzabad is blessed with an excellent cold season.

I show these specimens in tabular form :—

Date.	Sex.	Length.	Tail.	Ventrals.	Subcaudals.	REMARKS.
1905.						
22nd April	♂	6 $\frac{3}{4}$ "	1"	180	53	Killed inside house at night.
2nd May	♂	7 $\frac{3}{4}$ "	$\frac{3}{4}$ "	186	46	19 ventrals between navel and anal.
1st October	♂	1' 4 $\frac{1}{2}$ "	2 $\frac{7}{8}$ "	176	54	Anal entire. Killed in a well.
3rd October	♂	1' 4 $\frac{1}{2}$ "	2 $\frac{3}{4}$ "	172	50	
23rd March	♂	1' 2 $\frac{3}{8}$ "	2 $\frac{1}{2}$ "	177	55	Detached fragment of parietal forms a pseudo temporal.
1906.						
29th March	♂	1' 3 $\frac{1}{4}$ "	2 $\frac{1}{4}$ "	192	45	
11th April	♂	6 $\frac{1}{2}$"	...	...	...
16th July	♂	1' 11 $\frac{1}{2}$ "	3 $\frac{7}{8}$ "	181	52	
17th July	♂	1' 9 $\frac{1}{2}$ "	...	193	47	
18th July	♂	1' 0 $\frac{3}{4}$ "	...	193	45	
27th July	♂	1' 11 $\frac{3}{4}$ "	4 $\frac{3}{8}$ "	181	55	
11th August	♂	1' 3 $\frac{3}{4}$ "	2 $\frac{3}{8}$ "	195	50	
18th August	♂	2' 0"	3 $\frac{3}{4}$ "	187	56	Contained 5 eggs in <i>abdomina</i> .
20th August	♂	1' 10 $\frac{3}{4}$ "	4"	182	52	
22nd August	♂	1' 10 $\frac{1}{2}$ "	4"	179	53	
Do.	♂	1' 9 $\frac{3}{4}$ "	3 $\frac{1}{2}$ "	189	50	Loreal absent on both sides. On the left the praefrontal meets the 2nd labial, on the right it fails to, and the post nasal touches the praecocular. A detached fragment of the parietal forms a pseudo temporal. Contained 4 eggs in <i>abdomina</i> .

Hypsirhina sieboldii.

Of the 12 examples acquired, 8 were males, 3 females, and one was not sexed.

They were all captured during or subsequent to flood time in August.

Nearly all were young of the year, at least ten being so. Whether the 12 $\frac{3}{4}$ inch specimen was so, is very doubtful, I am inclined to regard it as a second year specimen. There was only one adult. This is very probably due to the activity of this species, and would be better manifested by the adults which I know have great command of progress in the water.

Many of the young were brought alive, and their progress on land is

remarkable. Instead of moving evenly forward by a series of bilateral undulations like most snakes, progress is effected by a unilateral effort, the body about its second quarter being thrust forward on one side. This done the head and body anterior to this fold are advanced, and the fold thus straightened,

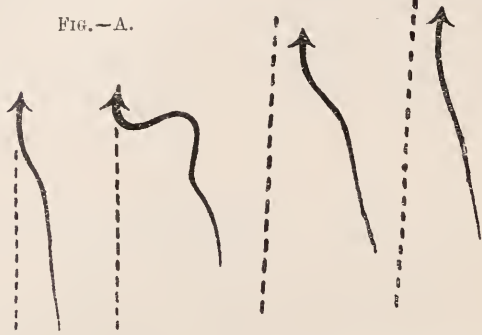


FIG.—A.

when a repetition of the act occurs, the fold being continually thrust forward on the same side. This curious manœuvre makes it appear that the snake is moving sideways as will be seen by the diagrammatic illustration attached (figure A).

If hustled, the vehemence with which the coil is thrown forward, makes progression appear to consist of a series of leaps, and I believe I was not mistaken in supposing that the effort was sometimes so vigorous that the body actually cleared the ground. If repeatedly irritated as by tapping the tail smartly, a game which amused me considerably, the little reptile would erect itself, poise with head averted and jaws open, exactly as a pup would do under similar circumstances in anticipation of the next blow, and the resemblance was so strong I almost expected to hear an accompanying warning growl. It strikes with great pluck and determination, and I had to be very smart to avoid being bitten.

Another specimen when not anticipating repeated blows, but acting on the defensive, lay closely crouched to the ground, especially in the hind part of the body. It then lay and dilated itself with its head on the ground retracted into a side loop touching the first coil of the body. When teased it struck upwards very fiercely, retracted the head almost instantaneously, and whisked its body round so as to lash with its tail, and then took up an exactly reverse position. A repetition after some time caused a reversion of the same manœuvre and the body then resumed its original position. This I have shown diagrammatically (figure B).

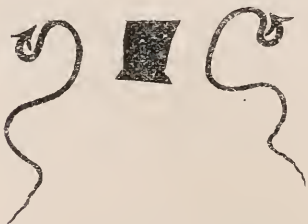


FIG.—B.

The physiognomy of the snake is unpleasant from the underlung condition of the lower jaw. Though the majority were caught in or beside the water, two at least were reported to have come into habitations. Many habitations though some distance from the river are connected by deep drains which in flood time would serve as conduits inland, and which after a subsidence would be cut off from the river, and might lead to overland excursions in the endeavour to regain their proper haunts.

Food.—One had swallowed a fish, and another a frog.

Breeding.—The season was evidently over, and the young by August already launched abroad.

Colour.—It is curious that in this snake the bars, which of course are developed independently on each side, nearly always fail to meet their corresponding fellows on the middle of the back; and in this respect it differs from other barred or banded snakes like the Bungarums and Lycodons where the failure to meet is quite unusual.

I append a table of the specimens.

Date.	Sex.	Length.	Tail.	Ventrals.	Subcaudals.	Scales.			REMARKS.
						2 heads lengths after head.	Mid-body.	2 heads lengths before vent.	
1906,									
5th August ..	♂	8 $\frac{3}{4}$ "	1 $\frac{5}{8}$ "	150	53	29	29	23	Killed in a house. A frog swallowed.
6th August ...	♂	9"	...	149	51	29	29	23	
Do. ...	♂	8 $\frac{1}{4}$ "	1 $\frac{1}{4}$ "	152	50	29	22	29	
7th August ..	♀	1' 6 $\frac{3}{8}$ "	3"	150	51	29	30	25	
8th August ...	♂	9 $\frac{3}{4}$ "	...	155	54	29	29	23	
10th August ..	♀	9 $\frac{3}{8}$ "	...	150	49	29	29	23	
11th August ...	♂	9"	...	152	54	29	29	21	23 ventrals between navel and anal.
17th August ...	♂	10 $\frac{1}{8}$"	...	...	...	29	28	22	
18th August ..	♂	12 $\frac{3}{4}$ "	...	148	?	...	...	...	30 ventrals between navel and anal.
24th August	10 $\frac{3}{8}$"	...	...	...	...	...	...	A fish swallowed.
25th August ...	♂	9 $\frac{3}{8}$"	...	...	...	...	...	...	Killed in a house.
27th August ...	♂	11"	1 $\frac{7}{8}$ "	155	55	29	29	23	Labials 9 on the right side, the 4th touching the eye, 7 on left side, the 3rd touching the eye.

Dipsadomorphus trigonatus.

15 specimens were brought in to me, 8 females, 5 males and the remaining 2 were not sexed.

Food.—The only one that had recently fed contained a lizard in the stomach, probably one of the genus *Calotes*.

Breeding.—3 females were found egg-bound in July and August.

The following is the detail of the specimens:—

Date.	Sex.	Length.	Tail.	Ventrals.	Subcaudals.	REMARKS.
1905.						
15th May ...	♀	1' 5½"	3¼"	222	84	22 ventrals between navel and anal.
6th July ...	♂	1' 10½"	4"	211	84	
13th July ...	♂	1' 3½"	2¾"	207	82	22 ventrals between navel and vent.
22nd July ...	♀	2' 3½"	5"	226	82	
26th July ...	♀	2' 2¾"	4¾"	224	83	6 eggs in <i>abdomina</i> $\frac{9}{10}$ " long.
11th October ...	♂	2' 1¾"	5½"	218	90	
31st October ...	♀	2' 3"	...	233	...	Tail docked.
1906.						
23rd June ...	♀	1' 8¾"	6¾"	218	78	
26th June	Much decomposed.
12th July ...	♂	2' 0¾"	5"	...	...	Do.
22nd July ...	♀	2' 6½"	...	222	77	2nd subcaudal entire. Only the 4th and 5th labials touch the eye.
23rd July ...	♂	1' 8"	3¾"	218	90	
25th July	Cut up by mowing machine.
1st August ...	♀	2' 7"	6"	...	...	5 eggs in <i>abdomina</i> , $\frac{17}{10}$ " long. A lizard in stomach (<i>Calotes</i> sp.)
7th August ...	♀	1' 10½"	6¼"	229	76	3 eggs in <i>abdomina</i> $\frac{18}{10}$ " long.

Psammophis leithii.

I obtained a single specimen whilst encamped near Rae Bareilly. It was a female 2 feet 1¾ inches long, the tail 7½ inches. It was quite typical. The ventrals and subcaudals were 170+95. It had fed

on a mouse. I have alluded to this specimen in a previous note in this Journal which extends the habitat previously recorded.*

Psammophis condanarus.

Of 23 specimens that came into my hands 16 were females, 6 males, and 1 was not sexed. The living examples were active, vivacious, and not backward in the use of their teeth.

The species appears to me to be subarbooreal in habit.

Food.—One had eaten a frog, and two others a skink (*Mabuia spec?*).

Breeding.—Two were reported to be found in company on the 27th of August, but one only, a female, was captured.

Scale characters.—The two last ventrals were bifid in one example. The labials were 9 with the 4th and 5th touching the eye in two specimens. I give a list in detail.

Date.	Sex.	Length.	Tail.	Ventrals.	Subcaudals.	Scales.			REMARKS.
						2 heads length after head	Mittbody.	2 heads length before vent.	
1905.									
10th July ...	♀	174	84	17	17	13	
13th November.	♀	1' 8 $\frac{3}{4}$ "	5"	180	83	17	17	15	A skink eaten.
1906.									
21st March ...	♂	3' 3 $\frac{5}{8}$ "	10 $\frac{5}{8}$ "	178	92	17	17	13	Labials 9 on right side, 5th and 6th touching the eye.
10th July ...	♀	2' 5"	7 $\frac{1}{4}$ "	185	87	17	17	13	
6th August ...	♀	1' 7"	4 $\frac{5}{8}$ "	188	84	17	17	13	
Do. ...	♀	1' "	5 $\frac{1}{8}$ "	180	90	17	17	13	A skink <i>in gastro</i> .
Do. ...	♀	1' 4 $\frac{3}{8}$ "	3 $\frac{1}{8}$ "	187	88	17	17	13	12 ventrals between the navel and anal shield.
7th August	Decomposed.
8th August ...	♀	2' 6 $\frac{3}{4}$ "	8 $\frac{1}{4}$ "	176	88	17	17	13	
Do. ...	♀	2' 4 $\frac{1}{2}$ "	5 $\frac{1}{4}$ "	?	...	17	17	13	Tail imperfect.
11th August ...	♂	1' 7 $\frac{1}{2}$ "	5"	180	92	17	17	13	Labials 9 on left side, the 5th and 6th touching the eye.

* This appears on page 203 of this issue.

Date.	Sex.	Length.	Tail.	Ventrals.	Subcaudals.	Scales.			REMARKS.
						2 heads length after head.	Midbody.	2 heads length before vent.	
1906.									
14th August ...	♀	2' 3"	3½"	?	...	17	17	13	Tail imperfect.
Do. ...	♀	2' 0½"	6"	...	...	17	17	13	
17th August ...	♀	1' 10"	5½"	177	88	17	17	13	
Do. ...	♂	1' 10½"	5½"	180	87?	17	17	13	Tail slightly imperfect.
18th August ...	♂	3' 1"	8½"	177	82½	17	17	13	Do. do. do. Last two ventrals bifid.
Do. ...	♀	1' 8½"	5¼"	180	87	17	17	13	
Do. ...	♀	2' 6¼"	4"	180	?	17	17	13	Tail imperfect.
19th August ...	♂	1' 2¾"	3½"	179	82	17	17	13	10 ventrals between navel and anal shield.
20th August ...	♀	3' 2½"	9½"	180	85	17	17	13	A frog <i>in gastro</i> .
22nd August ...	♀	2' 6½"	6½"	...	...	17	17	13	
27th August ...	♂	1' 9¾"	8¼"	177	83	17	17	13	
Do. ...	♀	1' 7¾"	8"	...	...	...	...	...	Reported in company with another which escaped.

Bungarus walli.

This new species was figured and described in an earlier issue of this Journal (Vol. XVII, p. 608). I obtained 8 specimens.

Bungarus candidus.

Of 62 specimens 58 were sexed, 53 were males, and 25 females.

A large number were found in or about habitations and chiefly at night.

Food.—Young seem to rely upon the little blindsnakes (*Typhlops bra-minus*) for subsistence, but older examples though frequently ophio-phagous exhibit very catholic tastes in the choice of food. Young mammals, toads, frogs, and once a young monitor lizard were devoured.

Breeding.—The young began hatching in July.

Scale characters.—In at least three specimens the 2nd supralabial was divided into an upper and a lower part.

Colour.—The vast majority of specimens were coal-black with the usual white linear arches over the back disposed in pairs, and most conspicuous in the latter half of the body.

Six examples were blackish-brown, calling to mind the coloured figure of this snake in Fayerer's work, which I had always considered a poor plate, and still think a misleading one, as this colour variety is distinctly rare. I never saw it before.

One specimen was coloured very peculiarly, the hue might be likened to that of dun as applied to a horse, otherwise as in the case of the brownish specimens, the white arches were typical of the common Indian variety. I append a detailed list of the specimens.

Date.	Sex.	Length.	Tail.	Ventrals.	Subcaudals.	REMARKS.
1905.						
?	♀	210	43	
20th April ...	♂	3' 2 $\frac{1}{4}$ "	5 $\frac{1}{4}$ "	212	48	In lucerne bed by stables.
27th April ...	♂	2' 9"	4 $\frac{3}{8}$ "	212	49	2nd supralabial divided (†).
23rd May ...	♂	3' 8"	5 $\frac{3}{8}$ "	211	48	In deep well in the water.
26th June ...	♂	3' 4"	5 $\frac{3}{8}$ "	211	49	Killed in stable at dawn.
6th July ...	♀	3' 6"	5 $\frac{1}{4}$ "	206	46	Killed by chowkidar in Cavalry Mess.
7th July ...	♀	2' 1"	3 $\frac{1}{2}$ "	205	49	Seen, and caught on ceiling cloth.
Do. ...	♂	1' 11 $\frac{1}{2}$ "	2 $\frac{2}{3}$ "	213	44	Stomach contained a frog.
13th July ...	♀	2' 11 $\frac{1}{8}$ "	4 $\frac{3}{4}$ "	211	49	
23rd July ...	♂	4' 1 $\frac{1}{4}$ "	6 $\frac{1}{2}$ "	207	48	
3rd October ...	♀	1' 3 $\frac{5}{8}$ "	2"	201	48	In brickwork of well.
23rd October ...	♂	2' 2" about	...	...	...
24th October ...	?	3' 6"	...	...	...	In water in garden catchpit.
25th October ...	♂	2' 8 $\frac{1}{2}$"	...	..	...	Killed in Native Officers' Quarters, 8 p.m.
3rd November.	♂	3' 6"	5 $\frac{3}{8}$ "	214	46	Killed in godown. A frog in stomach.

Date.	Sex.	Length.	Tail.	Ventrals.	Subcaudals.	REMARKS.
1906.						
17th June ...	♂	2' 3 $\frac{1}{4}$ "	3 $\frac{3}{8}$ "	210	49	Killed in water in catchpit of garden.
21st June ...	♂	1' 10 $\frac{1}{4}$ "	3"	213	49	A young Varan (<i>V. flavescens</i>) in gastro. Brownish-black colour variety.
23rd June ...	♂	3' 10"	6 $\frac{1}{8}$ "	211	50	2nd supralabial divided ($\frac{1}{1}$). A toad (<i>Bufo andersonii</i>) in stomach. Killed in officer's bungalow at night.
28th June ...	♀	11 $\frac{1}{2}$ "	...	205	46	Killed outside officer's bath-room, 7 a.m.
1st July ...	♀	3' 6 $\frac{1}{2}$"	...	...	...	Killed in house in Fyzabad City.
4th July ..	♀	1' 11 $\frac{1}{2}$ "	3 $\frac{1}{4}$"	...	...	Killed in Fyzabad Club.
5th July ...	♀	2' 3 $\frac{3}{8}$ "	3 $\frac{1}{2}$"	...	...	Killed in house in Artillery bazaar at night.
7th July ...	♀	3' 0 $\frac{1}{2}$ "	5 $\frac{1}{8}$"	...	...	Killed in officer's kitchen at night. A musk rat (<i>Crocidura caeruleus</i>) in stomach. Peculiar light-coloured specimen. (Dun as applied to horse.)
Do. ...	♀	11 $\frac{3}{4}$ "	1 $\frac{1}{2}$"	...	...	} Both found together in verandah of Civil Lines. Just hatched.
Do. ...	♀	11 $\frac{3}{4}$ "	1 $\frac{1}{2}$"	...	...
9th July ..	♂	3' 2 $\frac{1}{2}$ "	5"	208	46	Killed in verandah, Supply and Transport Lines. Brownish-black variety.
Do. ...	♂	1' 8 $\frac{3}{4}$"	...	...	...
11th July ...	♂	4' 0 $\frac{1}{8}$ "	5 $\frac{3}{8}$ "	214	49	Killed in water in catchpit of Mess.
Do.	11 $\frac{3}{8}$"	...	...	...
17th July ...	♀	1' 2 $\frac{1}{4}$"	...	...	...
18th July	1' 11 $\frac{1}{4}$"	...	...	...	Killed in Cantonment Hospital.
19th July ...	♂	3' 3 $\frac{1}{2}$"	...	...	...	Killed at night in Fyzabad City.

Date.	Sex.	Length.	Tail.	Ventrals.	Subcardials.	REMARKS.
1906.						
19th July	♀	1' 1 $\frac{1}{2}$"	...	...	...	Killed in house. A blind snake (<i>Typhlops braminus</i>) 3 $\frac{3}{4}$ " lying full length in the stomach.
Do.	♀	1' 1 $\frac{3}{8}$"	...	...	...	Killed within two yards of last.
20th July	...	1' 1 $\frac{3}{4}$"	...	...	...	Killed close to where the last two were killed. A small calow young mammal in stomach (shrew?).
21st July	♀	1' 0"	...	...	...
22nd July	♂	1' 1 $\frac{1}{8}$"	...	...	...	A <i>Typhlops braminus</i> , 4 $\frac{1}{4}$ " long, in stomach. Killed in servant's house.
23rd July	♀	1' 1 $\frac{3}{4}$"	...	...	...	A <i>Typhlops braminus</i> , 2 $\frac{1}{4}$ " long, in stomach. Killed in a house in city.
24th July	♂	3' 9 $\frac{1}{2}$"	...	...	...	Killed in officer's stables at dawn.
25th July	♂	1' 2 $\frac{1}{2}$"	...	...	...	Killed in R. A. Mess. Two small <i>Typhlops braminus</i> and a small frog in stomach.
Do.	♀	3' 2 $\frac{3}{4}$"	...	...	...	Killed in servant's godown.
27th July	♂	3' 7 $\frac{1}{4}$"	...	...	...	Killed in compound in Civil Lines. A brownish-black variety.
Do.	♂	2' 10"	...	...	...	Killed in house. A toad (<i>Bufo andersonii</i>) in the stomach.
28th July	♀	1' 11 $\frac{1}{2}$"	...	...	...	Killed in Police Officer's house. Two snakes (<i>Typhlops braminus</i>), 4 $\frac{1}{8}$ " and 5 $\frac{1}{4}$ " long. Lay fully extended in stomach.
Do.	♂	1' 1"	...	...	...	A snake (<i>Typhlops braminus</i>) in stomach.
31st July	♂	3' 0 $\frac{1}{2}$"	...	...	...	Killed in village house. The bones and hair of a mammal in the stomach.
Do.	♂	1' 11 $\frac{1}{2}$"	...	...	...
1st August	♀	3' 7 $\frac{3}{4}$"	...	...	...

Date.	Sex.	Length.	Tail.	Ventrals.	Subcaudals.	REMARKS.
1906.						
2nd August ...	♂	4' 0"	...	...	...	Killed on entering a house. The stomach contained the scales of a snake, and the extreme 2 inches of the tail tip being undigested permitted me to identify it as another krait (<i>B. walli</i>).
6th August ...	♀	1' 11 $\frac{3}{4}$"	...	...	...
Do. ...	♀	1' 7 $\frac{1}{4}$"	...	...	...
7th August ...	♂	3' 7"	...	...	..
8th August ...	♂	3' 5"	...	...	...	Killed in a house.
9th August ...	♂	4' 4 $\frac{3}{4}$"	...	...	...	Reported found in a tree; the height indicated about 20 feet.
10th August ...	♂	3' 7"	...	...	...	Brownish-black colour variety. 2nd supralabial divided (1).
11th August ...	♀	2' 6"	...	...	...
18th August ...	♂	2' 6"	...	...	...
19th August ...	♂	3' 7"	...	...	...
23rd August ...	♂	2' 8 $\frac{1}{4}$"	...	...	...	Brownish-black colour variety. Killed in Saddar Bazaar. The stomach contained 6 blind and callow young mice.
Do. ...	♀	1' 5 $\frac{1}{4}$"	...	...	...
28th August ...	♂	2' 8 $\frac{1}{4}$"	...	...	...	Brownish-black colour variety.
29th August ...	♀	2' 10 $\frac{3}{4}$"	...	...	...

Naja tripudians.

Of 39 specimens that came into my hands, 19 were males, 17 females, and 3 were not sexed.

During the hot weather a cobra got into a quailery at night. 13 quails were found dead scattered about the floor in the morning and a cobra was found in the enclosure with a quail in its stomach.

The cobra brought to me on the 7th August 1906 was captured under somewhat amusing and novel circumstances. On the night of the 5th August it came into a native house, found its way into a hen coop, and killed the hen and six chickens. Three of the latter it ate,



Fig. 1.



Fig. 2.



Fig. 3.



Fig. 4.



Fig. 5.



Fig. 6.

F. WALL, DEL.

VARIATIONS IN THE MARKINGS OF THE HOODS OF COERAS.

and subsequently disgorged I am told. The incensed household agreed to sit up on the night of the 6th and had a fish hook baited with a frog to tempt it. About 3 a.m. the cobra emerged, tackled and swallowed the frog to the great satisfaction of the revenge-seeking inmates of the house who promptly despatched it. When brought to me, and cut open, sure enough a large frog was in the stomach still attached to a fish hook that would have held a mugger, and the line was issuing from the snake's mouth.

Breeding.—I obtained no gravid females, but young were hatching in July.

Food.—Rats were frequently taken, but toads and frogs also.

Colour.—The most striking point of interest to me was the variation exhibited by the specimens in colour and especially in hood markings. Most of the specimens I placed in Mr. Boulenger's Category "Aa" (Catalogue, 1896, Vol. III, p. 381). It will be seen, however, that many of the specimens were so peculiarly marked that the scheme laid down in that authority's work made it impossible to know with which to include them.

Every amateur photographer of many in cantonments had his camera out of order whenever I got a specimen I wanted to take a faithful record of. I have, however, roughly sketched the hood marks of many as they came in, and these I hope will be of some use in showing their great variation.

In addition I give other details in tabular form of the specimens.

Date.	Sex.	Length.	Tail.	Ventrals.	Subcaudals.	Scales.			Prevailing colour.	REMARKS.
						2 heads lengths behind head.	Midbody.	2 heads lengths before vent.		
1905.										
... ..	♂	189	60	23	21	15	Wheat...	Hood marks as in fig. 10.
... ..	♀	4' 1 $\frac{1}{8}$"	?	...	...	26	21	15	Blackish.	Tail docked. A large rat in stomach. Hood marks as in fig. 5.
... ..	♀	2' 0 $\frac{1}{4}$ "	4 $\frac{1}{8}$ "	193	58	?	23	15	Do.	Lower temporal touches 5th, 6th and 7th supralabials.